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09/637,442	08/11/2000	Shannon Lee Korson	13DV13511	7955

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EXAMINER

PHAM, KHANH B

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/637,442

Applicant(s)

KORSON ET AL.

Examiner

Khanh B. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5 and 8-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 8-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claims 1-2, 5, 8-19 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Jiang (US 6,278,913 B1), hereinafter "**Jiang**", and in view of Dahlberg (US 6,463,439 B1), hereinafter "**Dahlberg**".

As per claim 1, Jiang teaches a method of exporting data from an engine condition monitoring program database to a long term storage destination database (See Fig. 1), said method comprising:

- “downloading data recorded in a flight data recorder to a program database retaining only recent data in a ground-based computer system (i.e., “Ground Station”, Fig. 1, layer 4) having an engine monitoring program using said program database for storage and analysis” at Col. 4 lines 54-67 and Col. 5 lines 55-67;
 - “extracting data from said program database, wherein said data comprises engine configuration data, aircraft configuration data, engine input data, engine raw output data, engine smoothed output data, aircraft input data, aircraft raw output data, aircraft smoothed output data, alert data, initialization data and compressed data” at Col. 4 lines 54-67 and Figs. 12a-12b;
 - “exporting said extracted data to said long term storage destination database (i.e., “Flight Management Center Database”, Fig. 1, layer 5)” at Col. 6 lines 1-13;
- Jiang does not teach the step of: “after a successful export, updating an external time file with the date and time of said successful export”. However, Dahlberg teaches a method for incremental extracting data from a database (Col. 5 lines 47-55) utilizing time stamps to indicate the time of the last full extract at Col. 6 lines 55-60. As noted by Dahlbert, the time stamps help “reduce the time spent extracting data from the database. Instead of extracting the whole table, only information that has changed since the last full extraction is extracted” at Col. 5 lines 47-52. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Dahlberg and Jiang’s teachings by adding the time stamps after a successful export as suggested by Dahlberg to Jiang’s method in order to reduce the time and

resource required for the next data extraction, because only changed and added data identified using the time stamps are exported.

As per claim 2, Jiang and Dahlberg teach the method of claim 1 as discussed above. Dahlbert also teaches: "said step of extracting data from said program database comprises extracting only data that is new or changed since the previous successful export" at Col. 5 lines 47-55.

As per claim 5, Jiang teaches in a computer system having an engine condition monitoring program (Fig. 1, layer 1) , a program database (Fig. 1, layer 4) comprising a number of data tables and a long term storage destination database (Fig. 1, layer 5); a method of exporting data from said program database to said destination database comprising:

- "downloading data recorded in a flight data recorder to said program database for short term storage and analysis" at Col. 5 lines 53-67;
- "retrieving data found in searching said program database, wherein said data comprises engine configuration data, aircraft configuration data, engine input data, engine raw output data, engine smoothed output data, aircraft input data, aircraft raw output data, aircraft smoothed output data, alert data, initialization data and compressed data" at Col. 4 lines 54-67 and Figs. 12a-12b;
- "exporting said retrieved data to said long term storage destination database" at Col. 6 lines 1-13;

Jiang does not teach the steps of: "reading an external time file to determine the last date and time that data was successfully exported to said destination database;

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after a successful export, searching said program database for data that is new or changed since said last successful export; updating an external time file with the date and time of said successful export". However, Dahlberg teaches a method for incremental extracting data from a database (Col. 5 lines 47-55) utilizing time stamps to indicate the time of the last full extract at Col. 6 lines 55-60. As noted by Dahlbert, the time stamps help "reduce the time spent extracting data from the database. Instead of extracting the whole table, only information that has changed since the last full extraction is extracted" at Col. 5 lines 47-52. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Dahlberg and Jiang's teachings by adding the time stamps after a successful export and the step of searching database for changed or added data based on the time stamps as suggested by Dahlberg to Jiang's method in order to reduce the time and resource required for data extraction, because only changed and added data identified using the time stamps are exported.

As per claim 8, Jiang and Dahlberg teach the method of claim 5 as discussed above. Jiang also teaches: "wherein said program database includes a flight data table, and a number of engine data tables and aircraft data tables and said step of searching said program database comprises searching said flight data table for flight data that is new or modified since said last successful export" at Col. 4 lines 54-67 and Figs. 12a-12b.

As per claim 9, Jiang and Dahlberg teach the method of claim 8 as discussed above. Jiang also teaches: "retrieving data comprises retrieving data from said engine

data tables and said flight data tables for each flight data record found in said flight data table” Col. 4 lines 54-67 and Figs. 12a-12b.

As per claim 10, Jiang and Dahlberg teach the method of claim 9 as discussed above. Dahlberg also teaches “providing each of said engine data tables and said aircraft engine tables with an indication that data retrieval is completed after said flight data is retrieved from each table” at Col. 5 lines 3-10.

As per claim 11, Jiang and Dahlberg teach the method of claim 5 as discussed above. Dahlberg also teaches: “said program database includes a process indicator table” at Col. 5 lines 3-10, and “a number of engine data tables and aircraft data tables and said step of searching said program database comprises searching said process indicator table for reprocessed flight data that is changed since said last successful export” at Col. 5 lines 47-66.

As per claim 12, Jiang and Dahlberg teach the method of claim 11 as discussed above. Jiang also teaches: “said step of retrieving data comprises retrieving data from said engine data tables and said aircraft data tables for each reprocessed flight data record found in said process indicator table” at Col. 4 lines 54-67 and Figs. 12a-12b.

As per claim 13, Jiang and Dahlberg teach the method of claim 12 as discussed above. Dahlberg further teaches: “providing each of said engine data tables and said aircraft engine tables with an indication that data retrieval is completed after said reprocessed flight data is retrieved from each table” at Col. 5 lines 3-11.

As per claim 14, Jiang and Dahlberg teach the method of claim 5 as discussed above. Dahlberg also teaches: “said program database includes an initialization data

table, and said step of searching said program database comprises searching said initialization data table for initialization data that is changed since said last successful export” at Col. 5 lines 48-66.

As per claim 15, Jiang and Dahlberg teach the method of claim 14 as discussed above. Dahlberg also teaches: “wherein said step of retrieving data comprises retrieving initialization data found in said initialization data table” at Col. 9 lines 25-35.

As per claim 16, Jiang and Dahlberg teach the method of claim 15 as discussed above. Dahlberg also teaches: “providing said initialization data table with an indication that data retrieval is completed after said initialization data is retrieved from said initialization table” at Col. 5 lines 3-11.

As per claim 17, Jiang and Dahlberg teach the method of claim 5 as discussed above. Jiang further teaches: “said program database includes a compression data table” at Col. 5 lines 40-50. Dahlberg also teaches: “said searching said program database comprises searching said compression data table for compression data that is changed since said last successful export” at Col. 9 lines 25-35.

As per claim 18, Jiang and Dahlberg teach the method of claim 17 as discussed above. Dahlberg also teaches: “said step of retrieving data comprises retrieving compression data found in said compression data table” at Col. 9 lines 25-35.

As per claim 19, Jiang and Dahlberg teach the method of claim 18 as discussed above. Dahlberg further teaches: “providing said compression data table with an indication that data retrieval is completed after said compression data is retrieved from said compression table” at Col. 5 lines 3-11.

Response to Arguments

4. Applicant's arguments filed January 7, 2005 have been fully considered but they are not persuasive. The examiner respectfully traverses applicant's arguments.

Applicant argued that Jiang does not describe "**retaining only recent data on a ground based computer system**". On the contrary, Jiang teaches at Fig. 1 that flight data from the smart card is downloaded to the ground station for analyzing and generating reports (Col. 5 lines 55-67), and then exported to the Center Database for long-term storage (Col. 6 lines 1-13). Jiang did not store data of the previous flights in the ground station, therefore the ground station only retain data from the last flight. Jiang's ground station therefore retains only recent data as claimed.

Applicant argued that Dahlberg does not describe "**exporting said extracted data to said long term storage destination database**". On the contrary, the examiner did not rely on Dahlberg for teaching of this limitation. Instead, Jiang teaches this limitation at Col. 6 lines 1-13 reproduced below:

"Relevant data or information is then uploaded to the Flight Management Center Database (layer 5)" at Col. 6 line 4-5, and

"The data or information uploaded from the Ground Station is stored in the Flight Management information along with other relevant Aviation Management information". This information may be used for flight planning, flight analysis, fleet maintenance scheduling, and tracking of pilot performance, among other purposes" at Col. 6 line 7-13.

Applicant argued that Dahlberg does not describe: "after successful export, updating an external time file with the date and time of said successful export". On the contrary, Dahlberg teaches at Col. 5 lines 47-55 the method for exporting data from database 60 to the server 100, wherein "instead of extracting the whole table, only the information that has changed since the last full extraction is extracted". In order to detect changed information, Dahlberg utilizes a "time stamp column" to determine whether the information has changed since the last full extraction (Col. 6 lines 55-60). Dahlberg therefore teaches "updating an external tile file with the date and time (i.e., the time stamp column" of said successful export (i.e., full extraction).

Applicant argued that the 103 rejection is improper because "neither Jiang nor Dahlberg, alone or in combination, describe or suggest downloading data recorded in a flight data recorder to a program database retaining only recent data in a ground-based computer system... extracting data from said program database... exporting said extracted data to said long term storage destination database... after a successful export, updating an external file with the data and time of said successful export". On the contrary, as seen in section 3 and 4 above, Jiang and Dahlberg teach each and every claimed limitation. Motivation to modify or combine references has been provided. The prima facie case of obviousness has been established. The 103 rejection is therefore proper and should be maintained.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

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where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Jiang teaches the step of exporting data from the Ground Station to a central Database (Col. 6 lines 1-13). Similarly, Dahlberg teaches a method for exporting data from a database to a server. Dahlberg suggests utilizing "time stamp column" to perform incremental extraction because "incremental extractions can be used to **reduce the time spent extracting Xref data** from the database 60. Instead of extracting the whole table, only the information that has changed since the last full extraction is extracted. This also **improves application performance** as the incremental file 52 can be loaded into share memory 105 independent of the master file 56. Incremental extraction **takes less time** and the application... will need only to reload the updated information" (Col. 5 lines 47-55). Since both Jiang and Dahlberg deal with the problem of extracting data from one database to another, an ordinary skill in the art would be motivated to modify Jiang as suggested by Dahlberg in order to improve Jiang's step of extracting data to the Center Database, by extracting only the information that has changed, instead of the whole table, as suggested by Dahlberg. Adopting Dahlberg's incremental extraction method requires the use of time stamp as taught by Dahlberg at Col. 6 lines 55-67. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention

was made to combine Jiang and Dahlberg to produce the claimed invention. The 103 rejection is proper and should be sustained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh B. Pham
Examiner
Art Unit 2167

KBP
May 5, 2005

A handwritten signature in black ink, appearing to be 'MA' followed by a horizontal line.

**MOHAMMAD ALI
PRIMARY EXAMINER**